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| APPLICATION NO.         | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.  | CONFIRMATION NO. |
|-------------------------|-------------|----------------------|----------------------|------------------|
| 09/771,463              | 01/26/2001  | Alex Krister Raith   | 4015-841             | 6203             |
| 24112                   | 7590        | 11/07/2003           | EXAMINER             |                  |
| COATS & BENNETT, PLLC   |             |                      | CONTEE, JOY KIMBERLY |                  |
| P O BOX 5               |             |                      | ART UNIT             | PAPER NUMBER     |
| RALEIGH, NC 27602       |             |                      | 2686                 |                  |
| DATE MAILED: 11/07/2003 |             |                      |                      |                  |

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                          |                     |  |
|------------------------------|--------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b>   | <b>Applicant(s)</b> |  |
|                              | 09/771,463               | RAITH, ALEX KRISTER |  |
|                              | Examiner<br>Joy K Contee | Art Unit<br>2686    |  |

— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on January 26, 2001.
- 2a) This action is FINAL.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-4,8,9,13,14,17,23,25-28,31,32,39 and 45 is/are rejected.
- 7) Claim(s) 11,15,16,18-22,24,36-38,40-44 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
 If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
 a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                    | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                           | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2-4</u> . | 6) <input type="checkbox"/> Other: _____ .                                   |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-4,8,9,13,14,17,23,25-28,31,32,39 and 45 are rejected under 35 U.S.C. 102(e) as being anticipated by Hashimoto, GB 2339649.

Regarding claim 1, Hashimoto discloses a method implemented in a mobile terminal for establishing communications with a base unit in a cordless phone system, said method comprising:

storing a reference location (i.e., base station number of the independent system stored in advance in the registration system storage section) associated with said base unit in said mobile terminal (p. 27, lines 25 to p. 28, line 5 and p. 37, lines 7-15);

determining a current location (i.e., the number searching section searches the control signal received by the receiving unit and judges whether or not a base station number of the independent system or outdoor public system is included in the control signal, thus determining whether or not mobile is inside or outside area A or B, see Fig. 1) of said mobile terminal (p. 28, line 27 to p. 30, line 17);

computing a distance between said current location of said mobile terminal and said base unit (p. 11 15-19 and p. 19, lines 10-23);

conducting a search (i.e., number searching) for said base unit to establish communication with said base unit (p. 43, lines 11-27); and

controlling searching for said base unit based on said distance between said current location of said mobile terminal and said base unit by varying a search behavior of said mobile terminal dependent upon said distance between said current location of said mobile terminal and said base unit (p. 46, lines 5-17 and p. 49, lines 9-12).

Regarding claim 2, Hashimoto discloses the method of claim 1 wherein varying search behavior of said mobile terminal dependent upon said distance between said current location of said mobile terminal and said base unit comprises varying the frequency (i.e., reads on prior art wherein it is an inherent that the control signals from the independent system base station and a plurality of public system base stations are transmitted at different frequencies) of said search (p. 8, lines 4-11).

Regarding claim 3, Hashimoto discloses the method of claim 1, wherein varying a search behavior of said mobile terminal dependent upon said distance between said current location of said mobile terminal and said base unit comprises varying the duration of said search (p. 11, lines 10-19).

Regarding claim 4, Hashimoto discloses the method of claim 1, wherein storing a reference location associated with said base unit comprises: determining the current location of said mobile terminal when communication with said base unit is established (i.e., the number searching section searches the control signal received by the receiving

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unit and judges whether or not a base station number of the independent system or outdoor public system is included in the control signal, thus determining whether or not mobile is inside or outside area A or B, see Fig. 1) (p. 28, line 27 to p. 30, line 17); and storing said current location of said mobile terminal when communication with said base unit is established as said reference location location (i.e., base station number of the independent system stored in advance in the registration system storage section) (p. 27, lines 25 to p. 28, line 5 and p. 37, lines 7-15).

Regarding claim 8, Hashimoto discloses the method of claim 1 further comprising updating said reference location stored in said mobile terminal following a change in said reference location (p. 39, line 25 – p. 40, line 22).

Regarding claim 9, Hashimoto discloses the method of claim 8 wherein updating said reference location stored in said mobile terminal following a change in said reference location comprises: determining the current location of said mobile terminal when communication with said base unit is established (p. 38, line 25 to p. 39, line 11); comparing said current location of said mobile terminal to said stored reference location to detect a change in said reference location (p. 40, lines 5-11); and if a change in said reference location is detected, storing said current location in said mobile terminal as an updated reference location (p. 39, line 25 – p. 40, line 22).

Regarding claim 13, Hashimoto discloses the method of claim 1 wherein controlling searching for said base unit based on said distance between said current location of said mobile terminal and said base unit comprises determining a threshold (i.e., search control section counts up a count value of the counter unit and if the count

value exceeds 60 the number searching section carries out the judging operation) for varying said search behavior (p. 34, lines 3-27).

Regarding claim 14, Hashimoto provides evidence of the method of claim 13 wherein determining said threshold comprises defining a boundary of a home area containing said reference location, wherein said boundary serves as said predetermined threshold (see background art description, p. 7, lines 14-20).

Regarding claim 17, Hashimoto discloses the method of claim 1 further comprising determining an inherent position update frequency (i.e., since the frequency differs between the independent and public systems) based on said distance between said current location of said mobile terminal and said reference location (p. 8, lines 4-11 and p. 11, lines 10-19).

Regarding claim 23, Hashimoto discloses the method of claim 1 further comprising updating said current position (i.e., reads on changing the period, depending on location of mobile station) of said mobile terminal when communication with said base unit is established (i.e., mobile station belongs to a specific region) (p. 12, lines 15-22).

Regarding claim 25, Hashimoto discloses a dual function mobile terminal compatible with a cordless phone system comprising:

a positioning receiver (i.e., reads on receiving unit 3 which receives the control signal from the base unit) to compute a current location of said mobile terminal (p 28, line 27 to p 29, line 5) ;

inherently, a short-range RF interface to communicate with a base unit in said cordless phone system when said mobile terminal is within the range of said base unit (i.e., reads on inside area of independent system) and to search for said base unit when said mobile terminal is out of range (i.e., reads on outside of independent system, inside area of outdoor public system) said base unit (p 30, line 12 - p 34, line 2);

a processor (i.e., reads on combination of comparing, detecting and judging means) to compute the distance between said current location of said mobile terminal and a stored reference location for said base unit and to control a search behavior of said short-range interface based on said computed distance (p 11 15-19 and p 19, lines 10-23).

Regarding claim 26, Hashimoto discloses the mobile terminal of claim 25 wherein said short-range RF interface periodically searches for said base unit with a predetermined search frequency (i.e., reads on the inherent nature of the independent system having a different frequency than that of the outdoor public system) (p 8, lines 4-11).

Regarding claim 27, Hashimoto discloses the mobile terminal of claim 26 wherein said processor processor (i.e., reads on combination of comparing, detecting and judging means) controls said search behavior of said RF interface by varying said search frequency based on said distance between said current location of said mobile terminal and said base unit (p 19, lines 10-23).

Regarding claim 28, Hashimoto discloses the mobile terminal of claim 25 wherein said processor is programmed to store said current location as said reference location

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when said RF interface has established communication with said base unit (i.e., reads on mobile station has received control signal from base unit) (p. 29, lines 10-16).

Regarding claim 31, Hashimoto discloses the mobile terminal of claim 25 wherein said processor is programmed to update said reference location when said processor detects a change in the location of said base unit (p. 39, line 25 to p 40, line 11).

Regarding claim 32, Hashimoto discloses the mobile terminal of claim 31 wherein said processor detects a change in the location of said base unit by determining said current location of said mobile terminal upon mating (i.e., reads on registration or communication) with said base unit and comparing said current location upon mating with said base unit to a previously-stored reference location for said base unit (p. 39, line 25 to p 40, line 11).

Regarding claim 39, Hashimoto discloses the mobile terminal of claim 25 wherein said processor determines inherent position update frequency (i.e., since the frequency differs between the independent and public systems) based on said distance between said current location of said mobile terminal and said reference location (p. 8, lines 4-11 and p. 11, lines 10-19).

Regarding claim 45, Hashimoto discloses a system to permit communication of a wireless mobile terminal with the public switched telephone network comprising:

a public land mobile network (i.e., reads on outdoor public system) (p 28, lines 9-12);

a private cordless base unit connected to the public switched telephone network in the same manner as a conventional corded telephone (i.e., reads on independent system) (p 28, lines 9-12);

a mobile terminal comprising:

a positioning receiver (i.e., reads on receiving unit 3 which receives the control signal from the base unit) to compute a current location of said mobile terminal (p 28, line 27 to p 29, line 5) ; inherently, a short-range RF interface to communicate with a base unit in said cordless phone system when said mobile terminal is within the range of said base unit (i.e., reads on inside area of independent system) and to search for said base unit when said mobile terminal is out of range (i.e., reads on outside of independent system, inside area of outdoor public system) said base unit (p 30, line 12 - p 34, line 2)

a processor (i.e., reads on combination of comparing, detecting and judging means) to compute the distance between said current location of said mobile terminal and a stored reference location for said base unit and to control a search behavior of said short-range interface based on said computed distance (p 11 15-19 and p 19, lines 10-23).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 5-7,10,12,29,30,33,35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto, in view of Raith, U.S. Patent No. 6,625,457.

Regarding claims 5 and 29, Hashimoto discloses the method (and mobile terminal) of claims 1 and 25. Hashimoto fails to disclose wherein storing a reference location associated with said base unit comprises: determining the current location of said mobile terminal; and storing said current location of said mobile terminal in response to user input as said reference location.

In a similar field of endeavor, Raith discloses (wherein said processor is programmed for) determining the current location of said mobile terminal (col. 4, lines 21-41); and storing said current location of said mobile terminal in response to user input as said reference location (col. 5,lines 25-29).

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify Hashimoto to include user input of current location for the purpose of providing a "convenient way" to gain location information as suggested in Raith (col. 1,lines 54-57)

Regarding claims 6 and 30, Hashimoto discloses the method (and mobile terminal) of claims 1 and 25. Hashimoto fails to disclose wherein storing a reference location associated with said base unit comprises inputting said reference location by a user.

Raith further discloses (wherein said processor is programmed) storing a reference location associated with said base unit comprises inputting said reference location by a user (col. 5, lines 15-29).

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify Hashimoto to include user input of current location for the purpose of providing a "convenient way" to gain location information as suggested in Raith (col. 1, lines 54-57).

Regarding claim 7, Hashimoto discloses the method of claim 1. Hashimoto fails to disclose wherein storing a reference location associated with said base unit comprises storing said reference location in a removable smart card.

Raith further discloses wherein storing a reference location associated with said base unit comprises storing said reference location in a removable smart card (col. 5, lines 22-25).

At the time of the invention it would have been obvious to one of ordinary skill in the art to implement the use of a removable smart card in Hashimoto for the purpose of allowing flexibility in the use of a location database for retrieving location specific information.

Regarding claims 10 and 33, Hashimoto discloses the limitations of claims 9 and 32. Hashimoto does not disclose notifying a user when a change in said reference location is detected by said mobile terminal.

Raith discloses (wherein the processor) notifying a user when a change in said reference location is detected by said mobile terminal (col. 2, lines 5-7).

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify Hashimoto to include notification means for the purpose of allowing location specific information to be displayed at all times.

Regarding claims 12 and 35, Hashimoto discloses the method (and mobile terminal) of claims 8 and 34. Hashimoto fails to disclose wherein updating said reference location stored in said mobile terminal following a change in said reference location comprises: determining the current location of said mobile terminal in response to user input; and storing said current location of said mobile terminal determined in response to said user input as an updated reference location.

Raith further discloses (wherein said processor) updating said reference location stored in said mobile terminal following a change in said reference location comprises: determining the current location of said mobile terminal in response to user input (i.e., reads on user of the mobile requesting information) (col. 4, lines 20-41); and storing said current location of said mobile terminal determined in response to said user input as an updated reference location (col. 2, lines 5-17).

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify Hashimoto to include user input of current location for the purpose of providing a "convenient way" to gain location information as suggested in Raith (col. 1, lines 54-57).

***Allowable Subject Matter***

5. Claims 11,15,16,18-22,24,24,37-38,40-44 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter: Prior art of record fails to explicitly disclose, *inter alia*, wherein updating said reference location stored in said mobile terminal following a change in said reference location further comprises prompting the user to accept a change in said reference location stored in said mobile terminal and wherein defining a boundary of a home area containing said reference location comprises: determining the current location of said mobile terminal at a plurality of time instants when communication with said base unit is established; and determining said boundary of said home area based on said current location of said mobile terminal at said plurality of time instants.

***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hashimoto, U.S. Patent No. 6,405,063, discloses a communication method of cordless telephone (U.S. equivalent to GB2339649, used herein).

Raith, U.S. Patent No. 6,493,550, discloses a system proximity detection by mobile stations.

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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joy K Contee whose telephone number is 703-308-0149. The examiner can normally be reached on 5:30 a.m. to 2:00 p.m..

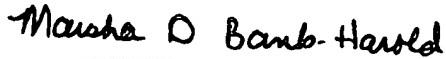
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on 703-305-4379. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-0377.



Joy Contee

November 3, 2003



MARSHA D. BANKS-HAROLD  
SUPERVISORY PATENT EXAMINER  
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